

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



76F6  
op. 3

# FOREIGN AGRICULTURE

September 20, 1976



Yemenian coffee

## U.S. Farm Sales To Mideast To Rebound

Foreign  
Agricultural  
Service  
U. S. DEPARTMENT  
OF AGRICULTURE



**In this issue:**

- 2 **U.S. Farm Products Still Striking Oil in Mideast**  
By John B. Parker, Jr.
- 5 **Colombia's Farm Exports Expected To Double in 1976**  
By Alfred R. Persi
- 6 **Soybean Feed Usage Gaining in Japan** By John Mortimer
- 8 **U.S. Soybean Estimate Cut, World Meal Supply Lower**  
By Alan E. Holz
- 10 **India Boosting Fruit and Vegetable Output for Export**  
By John B. Parker, Jr.

**This week's cover:**

Colombian coffee is the primary reason Colombia's agricultural exports are expected to double in 1976. Demand for Colombia's coffee is high, and prices are good. Also adding to increased export revenues is bigger demand for bananas, sugar, and cotton. See article beginning on page 5.

Earl L. Butz, Secretary of Agriculture

Richard E. Bell, Assistant Secretary for International Affairs and Commodity Programs

David L. Hume, Administrator, Foreign Agricultural Service

**Editorial Staff:**

Kay Owsley Patterson, Editor  
Beverly J. Horsley, Assoc. Editor  
G. H. Baker, Marcellus P. Murphy,  
Isabel A. Smith, Lynn A. Krawczyk.

**Advisory Board:**

Richard A. Smith, Chairman;  
John C. Foltz, Gordon O. Fraser,  
William Horbaly, James L. Hutch-  
inson, Richard M. Kennedy, J.  
Don Looper, Larry B. Marton,  
Brice K. Meeker.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget through June 30, 1979. Yearly subscription rate: \$34.35 domestic, \$42.95 foreign; single copies 70 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Contents of this magazine may be reprinted freely. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or Foreign Agricultural Service.

# U.S. Farm Products Still Striking Oil in Mideast

By JOHN B. PARKER, JR.  
*Foreign Demand and Competition Division  
Economic Research Service*

**A** REBOUND APPEARS likely in U.S. farm sales to the Mideast in late calendar 1976—following a 34.5 percent dip in fiscal 1976—as the addition of dozens of new farm products to the U.S. export sales list offsets reduced sales of wheat.

Egypt has remained at the top of the U.S.-Mideast export list, even as transportation tieups in the Persian Gulf, good crops in some countries, and increased competition from other suppliers caused lowered U.S. shipments in fiscal 1976.

Traditionally, U.S. exports to the majority of Mideast markets<sup>1</sup> have consisted of wheat and rice, but recently there has been a sharp drop in cereal exports—particularly to Iran. This caused the value of total agricultural shipments to the Mideast to fall to \$1.23 billion from the record \$1.87 billion tabulated in fiscal 1975.

The decline in value of wheat exports from \$640 million in fiscal 1975 to \$308 million in fiscal 1976 should be more than offset by strong gains in exports of frozen poultry, wheat, flour, coarse grains, tobacco, oilseeds, and horticultural products. As a result, the Mideast is expected to account for over 50 percent of U.S. commercial exports of rice, wheat flour, cottonseed oil, frozen chickens, and peanut butter during the next 12 months. Rapid gains in sales of poultry feed, nuts, pulses, vegetable seeds, and fruit preparations should also continue to occur.

The largest market for U.S. farm products in the Mideast continues to be Egypt, whose imports from the United States are expected to total between \$530 million and \$600 million in fiscal 1976, from \$425 million in fiscal 1975. Larger sales of wheat, wheat flour, and tobacco to Egypt in the past year helped offset a slight dip in sales of cottonseed

<sup>1</sup> Egypt, Israel, Iran, Iraq, Saudi Arabia, Oman, the United Arab Emirates, the Sudan, Yemen Arab Republic, Syria, Kuwait, Jordan, Lebanon, Bahrain.

oil. New opportunities for U.S. sales of frozen poultry, soybeans, rice, cotton, pulses, and processed foods are expected to open up in the coming year.

Israel, the second major Mideast market for U.S. farm products in fiscal 1976, has been a steady importer of U.S. wheat, corn, sorghum, and soybeans for over a decade. Total U.S. sales of farm products to Israel increased about 11 percent to \$291 million in fiscal 1976.

Other top U.S. markets in the Mideast include Saudi Arabia, \$150 million; Iran, \$148 million; and Iraq, \$71 million (1976 figures).

Following is a breakdown of the export situation for major U.S. products:

**Wheat and wheat flour.** U.S. wheat exports to the Mideast declined in fiscal 1976 to 2.1 million tons from the peak of 3.6 million tons in 1975. Exports of U.S. wheat to Egypt reached 947,000 tons in fiscal 1976—up 37 percent from 689,000 tons a year earlier. Deliveries to Israel, Sudan, and Jordan also increased. A rebound in exports of wheat to Iraq and Lebanon should occur in late 1976, along with new sales to the United Arab Emirates (UAE) and also to Oman.

**W**HEAT shipments to Iran declined from a record 1.7 million tons in fiscal 1975 to only 150,000 tons in fiscal 1976. Exports to Iraq were only one fourth the previous level. Consumer demand is rising rapidly in Iran, and a rebound in wheat imports in 1976/77 may occur, despite Iran's bumper wheat harvest this summer. Iran's 1976/77 wheat imports should approximate 1 million tons, but Australia, Turkey, and Canada may supply a substantial part of these wheat imports.

Exports of U.S. wheat flour to Egypt reached 185,000 tons in fiscal 1976 up from only 7,600 tons in fiscal 1975. Deliveries to Saudi Arabia were 217,000 tons, slightly above the peak of 213,000 tons shipped in fiscal 1975. Owing to





*Left, at Damman, Saudi Arabia, a rock causeway and steel trestle reach to a pier where ships unload their cargoes onto railway cars. Below, Egyptian children eating balady bread, enriched with U.S. flour.*



larger shipments to Egypt and UAE, U.S. exports of wheat flour to the Mideast almost doubled in fiscal 1976. New markets for flour could be developed in Oman and Yemen Arab Republic.

**Rice.** Strong gains in U.S. exports of rice to Saudi Arabia, Syria, and Yemen Arab Republic occurred in the recent year, but shipments to Iran in fiscal 1976 were 174,000 tons, down sharply from the record 462,000 tons delivered in fiscal 1975. Total U.S. rice exports to Mideast markets declined from 704,000 tons in fiscal 1975 to 428,000 tons in fiscal 1976. Shipments to Iraq in fiscal 1976 were 81,000 tons, down from the peak of 110,000 tons in fiscal 1975. However, larger monthly deliveries to Basra could occur late in 1976.

Pakistan is scheduled to deliver 400,000 tons of rice to Mideast markets in 1976, but recent floods in Pakistan may delay some of these shipments. Since Pakistan has already sold all exportable supplies of basmati rice from the 1975 crop, opportunities for U.S. sales to Kuwait, UAE, and Oman should exist during the next several months. Shipments of rice from the People's Republic of China (PRC) will be down sharply this year.

**Coarse grains.** Exports of U.S. coarse grains to the Mideast totaled 1.7 million tons in fiscal 1976. Corn exports to Egypt declined slightly to 456,000 tons from the previous peak of 459,000 tons recorded in fiscal 1975. Syria has become a new market for U.S. corn, importing 11,000 tons in fiscal 1976. Shipments of 25,000 tons of U.S. barley to Iraq opened up another new market in

the past year, offsetting smaller shipments to Iran. Exports of corn to Israel were up 40 percent in fiscal 1976, totaling 292,000 tons.

**Oilseeds and products.** Reduced U.S. supplies of cottonseed oil and increased Brazilian soybean oil exports limited Egyptian and Iranian imports of U.S. vegetable oils. Opportunities to sell more U.S. soybean oil in Saudi Arabia, and to open up new markets in Iraq and Syria are being explored.

Exports of U.S. soybeans to Israel continued upward last year, hitting 403,022 tons, compared with 351,542 tons in fiscal 1975. Among the emerging U.S. soybean markets are Kuwait, where a new crushing plant used over 7,000 tons of U.S. soybeans in fiscal 1975, and Egypt, where new crushing facilities scheduled to open soon could lead to large imports of U.S. soybeans. In addition, Iraq is considering looking for other suppliers, since encountering delivery problems with Brazilian soybean shipments.

**Processed foods.** Dramatic gains in sales of U.S. processed foods to Saudi Arabia, Kuwait, Bahrain, UAE and Oman occurred in fiscal 1976, with further gains likely as new hotels, restaurants, and supermarkets open in these countries, where most of the food is imported. Iran, Iraq, and Egypt are also excellent potential markets for certain types of processed food.

**Fruits and vegetables.** Lebanon's civil war caused its once-important shipments of fresh apples, oranges, onions, potatoes, and stone fruits to Iran, Iraq, and the Arabian Peninsula to dwindle, al-

though considerable supplies were still exported to nearby Syria and Jordan.

The first significant exports of U.S. oranges to Iran and Saudi Arabia occurred in fiscal 1975, although other suppliers have been far more successful. Rising demand for apples by Iran, Iraq, Saudi Arabia, UAE, and Oman in 1976 led to much larger imports from France, Australia, and Italy, but only token new purchases from the United States.

Shortages of potatoes available for export from Europe and Lebanon caused Iran, Iraq, Saudi Arabia, and Kuwait to make larger purchases from India and Egypt, with Iraq planning to import 15,000 tons of certified seed potatoes for the 1976/77 season. Imports by Arabian Peninsula countries of U.S. flaked and frozen potatoes increased markedly in the past year. Potential exists for large sales of U.S. flaked potatoes to hotels in Iran, Iraq, and UAE. These same markets are likely to import more dried onions and processed vegetables as well.

Exports of U.S. fruit and vegetable juices to oil-rich Mideast markets more than doubled in fiscal 1976, to \$10 million, and sales may accelerate in the coming months. Arab consumers like the United States natural fruit juices, which are often less expensive than drinking water.

Shipments of fruit and vegetable preparations, nuts, and miscellaneous processed foods to Saudi Arabia more than doubled in fiscal 1976—exceeding \$20 million. These products included almonds, nuts, grapefruit juice, tomato and orange juice, frozen mixed fruit



juice, frozen berries, and frozen and canned vegetables. Plans by some North American grocery chains to operate dozens of new supermarkets in Saudi Arabia in the next several years will greatly bolster sales of U.S. fruit and vegetable products.

**Frozen poultry.** U.S. exports of frozen poultry to the Mideast in fiscal 1976 reached \$12 million, compared to only \$2 million in fiscal 1975. Because demand is increasing relative to domestic production, the Mideast countries are raising their imports of frozen poultry meat. For example, Egyptian imports of frozen poultry in 1976, valued at \$35 million, are scheduled to exceed 36,000 tons, twice the 1975 level.

Traditional European suppliers are unlikely to be able to meet the Mideast's increasing needs, as higher costs for im-

ported feedstuffs have hampered plans to expand poultry output in the European Community (EC), and drought has reduced this year's domestic supply of feedgrains. As a result, the U.S. share of the Mideast market should rise well above the 2 percent level recorded in 1975. U.S. sales to Iraq alone are estimated at \$40 million, and other markets such as Saudi Arabia, UAE, and Kuwait may also increase their imports from the United States.

**Dairy products.** Dramatic gains in exports of fresh milk and cheese to Saudi Arabia boosted U.S. exports of these products to the Mideast to almost \$1.7 million in calendar 1975.

**Tobacco.** Egypt again has become a major market for U.S. tobacco with purchases valued at more than \$31 million in fiscal 1976, as has Syria with pur-

chases valued at \$13 million annually. Iraq took its first shipment in 5 years in April 1976—100 tons of flue-cured tobacco, valued at \$458,000—and is expected to buy another \$3 million worth in the coming year.

Over 85 percent of U.S. sales of farm products to the Mideast are made on a commercial basis. The United States also provided \$110 million in P.L. 480 financing, particularly to Egypt. Financing of wheat and feedgrains to Israel totaled about \$50 million in fiscal 1976. The new P.L. 480 program to Syria included 50,000 tons of rice for delivery in late 1976, with Syria also becoming an important cash market for U.S. tobacco, corn, livestock, and seed. Other P.L. 480 countries include Jordan and Yemen Arab Republic.

Shipments of U.S. food to Mideast

*Continued on page 12*

## EGYPT—TOP U.S. FARM EXPORT MARKET IN THE MIDDLE EAST

Egypt is the largest and fastest growing Mideast market for U.S. farm products, and expected strong gains in wheat, wheat flour, tobacco, and some new items should cause the value of U.S. agricultural shipments to rise even further in calendar 1976.

U.S. farm exports to Egypt are expected to surpass the \$530 million mark by the end of the year, up 25 percent from the record level of \$425 million in 1975, but a great deal of this total includes concessional shipments of grain under Public Law 480.

The major U.S. export to Egypt in 1976 and 1975 is wheat, with deliveries seen totaling 1.2 million tons this year, up from 935,000 tons in 1975. Wheat flour shipments also are expected to rise in 1976 to 250,000 tons from 73,000 in 1975. Shipments of wheat and flour under Title I of Public Law 480 are likely to exceed 1 million tons this year, compared with 650,000 tons in 1975.

Egypt recently purchased an additional 71,000 tons of U.S. corn, and total purchases in 1976 are likely to surpass the 1975 total shipment of 511,000 tons, valued at \$68.5 million. Egypt also will import corn this year from some of the Balkan countries and southern Africa. Elaborate

programs to boost output of poultry meat and milk have bolstered Egypt's need for imported feedstuffs.

A tender was recently opened for the purchase of 35,000 tons of soybean meal, and other tenders for purchases of animal feed are likely. U.S. exports of soybean meal to Egypt are likely to more than double in 1976, despite rising competition from Brazilian soybean meal.

Demand for meat in Egypt is rising faster than domestic supplies are expanding. Meat imports zoomed from 10,000 tons in 1974 to roughly 125,000 tons in 1975, including large supplies of beef from Europe, Brazil, Uruguay, and Australia. Egyptian imports of frozen poultry in 1976 are scheduled to exceed 36,000 tons—twice the amount imported in 1975—owing to increased shipments to private companies serving tourist hotels. Although only token shipments of U.S. frozen chickens and turkeys have been made to Egypt, orders for as much as 10,000-15,000 tons of U.S. poultry could occur in late 1976. Currently, the major suppliers of poultry to Egypt are Denmark, the Netherlands, the People's Republic of China, and Bulgaria.

Egyptian Government expenditures for food subsidies in 1975 exceeded \$1.3 billion. Over \$400 million of this came from tobacco import duties, with other funds coming from

profits of State trading companies and industries, particularly those dealing with cotton.

New programs and policies concerning food distribution are designed to prevent the cost of food subsidies from rising to much higher levels. Consumer prices in 1975 for bread, rice, sugar, cooking oil, and wheat flour were only about one-fifth above levels recorded in the late 1960's. Even with these increases, Egyptian food prices are still among the lowest in the world.

Prices for imported processed foods are about the same as those found in the European Community. Most food items enter Egypt free of duty, but soft drinks and certain items are still costly if they are imported. Imports of peanut butter, pie fillings, blueberries, canned soup, baby food, and lima beans supplied by U.S. firms have increased recently; however, some of these shipments are delivered by European distributors, and are not recorded in U.S. export statistics.

Another excellent sales opportunity for U.S. foods in Egypt exists in duty-free zones along the Suez Canal and portions of the Cairo and Alexandria metropolitan areas. Sales of snack foods, breakfast cereals, and foods used by international restaurants could rise sharply in these areas. —JOHN PARKER, ERS



# Colombia's Farm Exports Expected To Double in 1976

By ALFRED R. PERSI  
U.S. Agricultural Attaché  
Bogota

COLOMBIA'S AGRICULTURAL exports are expected to double in 1976—rising from US\$1 billion in 1975 to US\$2 billion in 1976—according to a midyear review by the Colombian Ministry of Agriculture. This anticipated jump is due mainly to the current coffee bonanza and heightened world demand for other Colombian products such as cotton, bananas, and sugar.

As expected, coffee exports will play a leading role in this favorable trade picture. Coffee is king in Colombia, with coffee exports traditionally accounting for roughly 40 percent of total foreign earnings. Given the phenomenal and seemingly unending rise in world coffee prices this year, it is not inconceivable that the value of Colombia's coffee exports at the end of 1976 could amount to over \$1.5 billion, or about 80 percent of the country's projected total agricultural exports. In 1975, coffee exports totaled \$677.9 million, or over 59 percent of total agricultural exports.

Colombia is currently enjoying a coffee windfall brought about by accentuated world demand and unprecedented high external prices. The well-publicized Brazilian coffee frosts of July 1975 have caused a reduction in that country's future coffee supply, increasing world demand for Colombian coffee, a superior mild-type coffee traditionally commanding a higher price than other Latin American and African type coffee beans produced.

The price rise on the world market for Colombian coffee beans this past year has been sensational. To illustrate: Colombian coffee beans on the New York wholesale market on June 30, 1975, were quoted at 72 cents per pound; by June 30, 1976 the price had risen 143 percent to about \$1.75 per pound. Should new Brazilian coffee frosts take place this season, the price will climb even further, and the \$2 wholesale price barrier will be crossed.

The Government of Colombia and



*Above, drying coffee beans in Colombia. Given the phenomenal rise in world coffee prices this year, Colombia's coffee exports could account for 80 percent of agricultural exports in 1976. Right, workers loading cotton for export. Cotton could become the second most important agricultural export from Colombia this year.*

the National Coffee Federation are concerned over the sudden rise in coffee earnings, fearing the boom will not last if high prices cause world coffee consumers to cut down on purchases. Also, the Colombian Government is apprehensive about the impact high coffee prices will have on the country's inflationary spiral, which it is attempting to control at 15 percent in 1976.

In addition, both the Colombian Government and the Federation are worried that the current returns from coffee



will lead to increased plantings and overproduction. Once planted, it takes a coffee tree roughly 3 years to begin producing, and some experts believe that today's high coffee prices will not last that long.

In recent months the Colombian Government has taken anti-inflationary measures to control the increased flow of foreign exchange earnings from its coffee exports (international reserves as of June 1 amounted to \$714 million).

Control measures include: Issuing 1

billion Colombian pesos (34.75 pesos=US\$1) in new Coffee Bonds to soak up excess purchasing power resulting from high New York wholesale prices; issuing Coffee Savings Certificates earning 18 percent interest semiannually over a 3-year period to absorb increased producer prices; increasing the coffee retention tax; and raising the Foreign Exchange Repatriation Requirements to \$259.25 per 70-kilogram bag, through which the exporter has to deposit dollars in exchange for pesos at the Banco de la Republica.

Raw sugar, Colombia's second most important agricultural export in 1975, is expected to drop to third position, behind cotton, in volume and value in 1976. The value of raw sugar exports in 1976 is estimated to drop to \$69 million from \$82.4 million in 1975. This is due to a softening in world market prices for sugar, which started in mid-1975 and continued into 1976. World sugar production also has picked up in 1976, particularly in the Southern Hemisphere.

Raw cotton exports, valued at \$80 million, in all likelihood will become Colombia's second most important agricultural export. Raw cotton prices rose to over 70 cents per pound in June 1976 from 40 cents per pound a year earlier.

This year Colombia's textile industry is expected to cash in on strengthened

world demand and good prices for textile manufactures, both internally and for export. Thus, the value of cotton exports is not expected to be as high as it could be otherwise.

Other agricultural products of importance to Colombia in its expanded export drive are bananas and beef. Based on expanded production, banana exports are expected to rise 37.6 percent from \$38.8 million in 1975 to \$53.4 million in 1976.

Colombia's beef exports in 1976 could well increase from \$36.5 million in 1975 to \$40 million in 1976, an increase of 9.6 percent, owing to the country's high production capacity and the recent rise in internal prices. Colombia's main foreign markets for beef products will be Venezuela and the Caribbean Islands of Aruba, Curaçao, Martinique, and Guadeloupe.

Through a bilateral trade agreement most of Colombia's live animal exports—primarily cattle—will be shipped to Venezuela, with exports amounting to roughly \$43.7 million in 1976, compared with \$52.1 million in 1975.

Owing to price increases for most essential agricultural and consumer products on world markets, as well as heightened demand for Colombia's agricultural commodities, the country is optimistic about achieving its goal of increasing agricultural exports by the estimated 100 percent in 1976.

# Soybean Feed Usage Gaining In Japan

By JOHN MORTIMER  
American Soybean Association  
Tokyo

SOME OF JAPAN's leading pork producers are achieving significantly improved returns by using special mixed feeds containing high percentages of soybean meal and corn in place of feeds that contain large proportions of low-cost byproduct materials.

This growing awareness of the importance of feed quality is one aspect of the trend toward commercialization of the Japanese swine industry, a development that began in the early 1960's.

Prior to 1960, swine production in Japan was limited to small-scale operations—one or two head per farm. Stock were raised in enclosed areas or a small building and fed table scraps and byproduct materials, such as soy sauce residue.

Although Chinese and European traders first introduced swine into Japan more than 300 years ago, swine production did not become well established until about 1900, when the Government began importing new breeds as part of its program to modernize Japanese agriculture.

Of these new breeds, Japanese farmers favored Yorkshires for their gentle nature, which allowed them to be easily managed by farm women. As late as 1960, the Yorkshire breed still accounted for 90 percent of the swine population in Japan.

In the early 1960's, the Japanese swine industry began to change rapidly toward larger, commercial-type operations. The average number of animals per farm increased from 2.4 in 1960 to 29.5 in 1974.

During this period, the swine population expanded rapidly from 1.9 million to 7.8 million head, while the number of farms engaged in pork production shrank from 799,000 to 264,000. Farms with 100 or more head increased steadily in number during this period, with 13,500 such farms reported to be

VALUE OF COLOMBIAN AGRICULTURAL EXPORTS, 1975-76  
[In thousands of U.S. dollars f.o.b.]

Commodity	1975	1976 <sup>1</sup>
Live animals .....	52,123	43,700
Beef .....	36,472	40,000
Dairy products .....	1,566	3,000
Grains and grain preparations .....	76,390	33,200
Rice .....	69,177	25,000
Fruits and vegetables .....	47,921	64,000
Bananas .....	38,769	53,400
Sugar, sugar preparations, and honey .....	89,124	77,600
Sugar .....	82,454	69,000
Molasses .....	3,562	3,600
Coffee, cocoa, and preparations .....	683,967	1,580,000
Coffee .....	677,887	1,575,500
Cocoa .....	3,341	4,500
Other food preparations .....	1,163	2,000
Beverages and tobacco .....	18,000	25,800
Tobacco .....	17,899	25,000
Seeds .....	735	800
Oilseed meals .....	18,355	6,000
Soybean meal .....	13,217	—
Cottonseed meal .....	5,041	6,000
Raw cotton .....	81,136	80,000
Live plants and flowers .....	19,628	25,000
Fresh cut flowers .....	19,503	24,500

<sup>1</sup> 1976 forecast based on industry projections and U.S. Agricultural Attaché estimates. Sources: *Incomex* and *Banco de la Republica*, Export Licenses Issued.



operating in 1974.

Other developments occurred as well, including the introduction of new breeds, improvements in management, and adoption of more efficient feeding practices. Modern breeds, such as Landrace, Large Yorkshire, Duroc, and Hampshire, are now common in Japan. Advanced breeding techniques, new equipment, and specialized manure disposal systems (increasingly important as operations expand) are gaining wider acceptance by farmers.

Despite these improvements, feeding management and low-quality feed still are problems. Many producers purchase feed solely on the basis of cost, giving little consideration to performance.

However, under the leadership of Tatsuo Soga, president of Soga-no-ya Farms and organizer of the 500-member Japan Pork Producers' Council, leading producers are striving for increased performance through better management and improved feed quality.

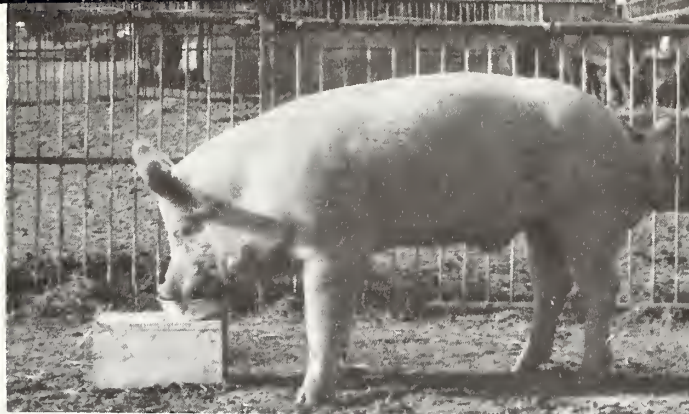
Mr. Soga and Council members are working with the American Soybean Association (ASA) in bringing performance criteria (as well as cost considerations) to the attention of producers in making feeding decisions.

On the Soga-no-ya farms, feed conversion ratios of about 3.0 have been achieved, compared with an average 3.4-3.6 for all producers farms. Also, by using special on-farm mixed feeds plus improved management techniques, hogs on the Soga-no-ya farms are raised to market weight (100 kg or 220 lb) in just 155 days. Producers relying on commercially produced complete formula feeds require 175-190 days to accomplish the same result.

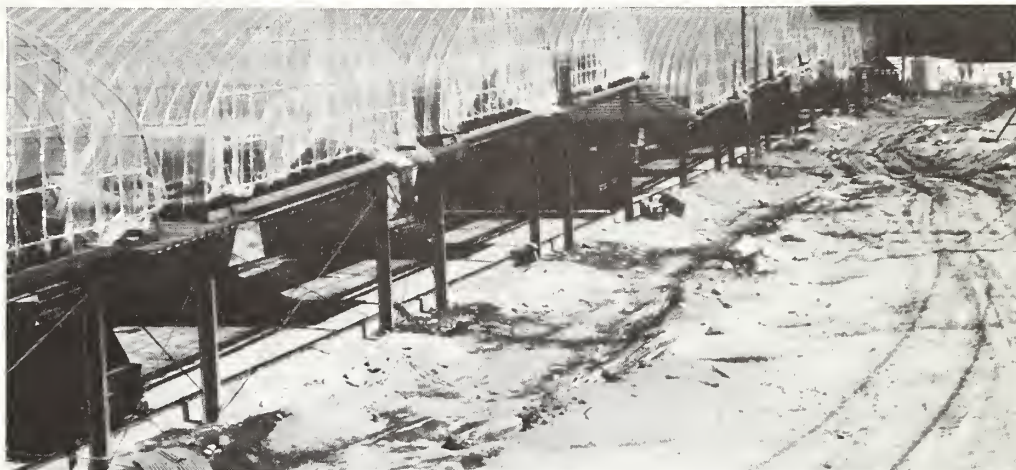
Another leading swine producer, Niyoue Notoya, is obtaining feed conversion ratios as low as 2.7 with feeds mixed according to ASA formulations. These improvements mean substantially lower production costs.

On-farm mixing (unusual in Japan) is used on the Soga-no-ya farms to obtain improved rations. But only the larger, independent operators can exploit this possibility because of opposition from the feed companies, restrictive Government regulations, and difficulties in obtaining the necessary ingredients directly—especially corn.

Corn imported for a number of non-feed uses is taxed. Consequently, the Soga-no-ya farms must buy so-called secondary mixed ground corn adult-



*Left: Yorkshire boar, purchased at U.S. National Barrow Show, on Tatsuo Soga's Nashiki farm. Below: Solar energy powers this manure-drying facility at a Soga farm. Bagged product is sold profitably as fertilizer.*



erated with up to 5 percent low-quality fish meal (to prevent its resale for non-feed use) for inclusion in its rations.

Although the secondary mixed corn is perishable and the inclusions of poor-quality fish meal sometimes causes digestive problems in stock, the Soga-no-ya rations are greatly superior to the normal formula feeds.

In addition to the secondary mixed corn, Soga-no-ya rations contain small quantities of high-quality fish meal, a premix of vitamins and minerals, and—depending upon the size of the animal being fed—11-30 percent soybean meal. Normal commercial swine rations generally average only 11 percent soybean meal.

On-farm mixing probably will never become as important in Japan as it is in the United States, since Japan must import feedstuffs from overseas.

Commercial formula feeds undoubtedly will continue to serve a major share of the market for the foreseeable future.

ASA's principal objective in Japan is improving commercial formula feed quality. To achieve this goal, ASA conducts feeding demonstrations, disseminates technical literature, supplies information to the trade press, sponsors seminars featuring leading animal scientists from the United States, and assists

producers in formulating and obtaining better quality feeds. ASA's recommended rations are based on U.S. formulations adapted for conditions in Japan.

As these new, improved formulations gain wider acceptance in Japan, the consumption of soybean meal for feed manufacturing should increase significantly, which should mean a greatly expanded export market for U.S. soybeans in Japan.

#### SOGA-NO-YA'S RATIIONS

Ration	Share of ration
<b>Starter</b>	
Ground yellow corn . . . . .	Percent 57.0
Soybean meal . . . . .	30.0
Sugar . . . . .	5.0
Skim milk . . . . .	5.0
Premix . . . . .	3.0
	100.0
<b>Grower</b>	
Ground yellow corn . . . . .	77.0
Soybean meal . . . . .	18.0
Fishmeal . . . . .	2.0
Premix . . . . .	3.0
	100.0
<b>Finisher</b>	
Ground yellow corn . . . . .	84.5
Soybean meal . . . . .	11.0
Fishmeal . . . . .	1.5
Premix . . . . .	3.0
	100.0



# U.S. Soybean Estimate Cut, World Meal Supply Lower

By ALAN E. HOLZ

*Foreign Commodity Analysis, Oilseeds and Products  
Foreign Agricultural Service*

WITH THE U.S. soybean estimate trimmed another 5 percent because of dry weather—and worldwide use of soybean meal stronger than expected—a further tightening of world supplies of high-protein meal appears imminent. In anticipation of this situation, prices have already rebounded sharply from those of a year ago, laying the basis for a braking of the current boom in soybean meal consumption.

However, if producers respond to the higher prices as expected—by boosting their plantings—the supply squeeze could be short-lived. The first indication of their response will come from the Southern Hemisphere, where Brazilian and Argentine producers will be planting soybean crops later this year for harvest and consumption beginning next April. Then, if soybean prices continue favorable relative to those of corn and other crops, U.S. producers will be encouraged to boost soybean plantings next spring following their shift this year to more lucrative crops.

The revised FAS forecast of world meal production—released September 13—places 1977 output at 68.4 million metric tons, soybean meal equivalent (SME), down 3.1 million tons from this year's volume and 900,000 tons below the July forecast.

The forecast for oil output (including vegetable, animal, and marine oils) is 48.5 million tons—unchanged from that of July but 220,000 tons less than the revised 1976 estimate.<sup>1</sup>

Considering that annual production gains normally run around 2.4 million tons for meal and 1.2 million for oil, this slowdown will inevitably result in a

sharp drawdown of stocks during 1977. And virtually all of the reduction will be in the United States, where stocks are ample thanks to a significant buildup since 1973.

Because of the momentum gained from still-strong demand, world trade in meals and oils is not expected to fall off during calendar 1977. The net result foreseen is a slight gain in meal exports to 32.8 million tons during 1977 from 32.6 million in 1976, while oil shipments inch up to 15.6 million tons from 15.4 million. Expected to account for the bulk of the gain are larger exports of soybeans and products from Brazil and palm oil from Malaysia.

The United States, on the other hand, will see a shrinking of its exports and shares of world oil and meal trade. U.S. shipments of oilseed and oil (including animal fats) are projected to dip to 4.6 million tons, oil basis, from the 4.7 million estimated for 1976, reducing the U.S. share of world oil trade to 30 percent from 31 percent. A steeper, 800,000-ton, decline is seen for U.S. exports of oilseeds and meals, which are now projected at 16 million tons (SME), or 49 percent of world trade, compared with 16.8 million, (52 percent) estimated for 1976.

The major implications of these prospective changes, in brief, are:

- Supplies of meal and oil will be adequate to meet domestic and foreign meal and oil requirements, but prices will average substantially above those of the past season.

- A further gain in soybean meal prices relative to grain will likely encourage a significant expansion in U.S. soybean acreage in 1977.

- Oil supplies relative to demand will continue to be more abundant than meal; hence, the bean crush will be determined by meal, rather than oil, demand.

- Higher meal prices should restrict the rate of U.S. crush. As crushings fall, stocks of oil will drop significantly.

- Crushing margins will continue under pressure from expanding exports of Malaysian palm oil and Brazilian soybean oil.

- Above-trend increases in world oilseed production will be needed next year.

At the heart of the changing picture is the United States, where depressed soybean prices and large stocks at the beginning of 1976 led many farmers to reduce soybean plantings in favor of corn and other more profitable crops. These farmers saw little hope for a profitable season since 5.0 million tons of soybean stocks—the highest in 5 years—were then overhanging the market. As a result, many U.S. producers downshifted their soybean plantings, contributing to an 8 percent cutback in 1976 U.S. soybean area.

Later, dry weather began to trim yield prospects and world demand for soybean meal accelerated after having fallen during 1975 for the first time in recent history. Reflecting the deteriorating prospects, the August USDA crop report forecast a 12 percent decline in U.S. soybean production to 36.6 million tons (1,344 million bu.) from the 41.4 million tons (1,521 million bu.) of 1975. Continued dry weather through the first of September nipped the crop further, to an estimated 34.7 million tons (1,274 million bu.)—16 percent less than last year.

U.S. exports of soybeans and products, meantime, are finishing up possibly the best season ever, with 1975/76 exports of soybeans and meal estimated at 16.7 million tons (SME). This compares with only 13 million tons in 1974/75 and the record of 16.7 million in 1973/74.

THE rebounding demand, together with the reduced 1976 harvest, has driven up prices and will likely reduce use of soybean meal as well as other high-protein meals in livestock feed rations. Consumption of meal should thus ease in 1977, with sagging domestic needs—accounting for the bulk of the decline—despite prospects for some increase in U.S. livestock numbers. Moreover, U.S. livestock-product output could fall short of expectations since rising feed prices are reducing the profitability of livestock production.

Abroad, similar forces may curb demand for U.S. soybeans.

In addition, the European Community is considering imposing taxes on soybean imports and may take further

<sup>1</sup> Meal and oil production are calculated on the basis of assumed crushings and extraction rates applied to that portion of each crop available for crushing and/or export and not actual crushings. The 1977 forecast includes meal and oil from Northern Hemisphere crops harvested in the second half of 1976 combined with the forecasts of Southern Hemisphere crops to be harvested in the first half of 1977.



steps to encourage substitution of its sizable stocks of nonfat dry milk for soybean meal and other proteins used in livestock feed. The Community will, on the other hand, be more dependent on supplemental livestock feeding this year because of the severe drought that has reduced its 1976 grain and forage crops. It will thus have to import larger shares than usual of the needed feed ingredients.

Together, these factors are expected to prompt a cutback in U.S. exports of soybeans and products and a sharp reduction in U.S. stocks. The latter could fall to about 2.7 million tons (100 million bu) by September 1, 1977, from the 6.0 million (220 million bu) estimated for the same date a year earlier.

In the United States, one partially offsetting factor is recovery in this year's cottonseed crop from the reduced harvest of 1975. Many farmers shifted out of soybeans into cotton as price ratios began to favor the latter, with the result that U.S. cottonseed production in 1976 is estimated at 3.6 million tons—225,000 (SME), above that of 1975. This expansion should lay the basis for greater domestic availability of meal and somewhat larger availabilities of oil for export.

In the foreign sector, a mixed production picture is indicated by a prospective above-trend increase of 1.9 million tons for meal production and a slightly below-trend gain of 810,000 tons for oil. However, foreign exports of both oils and meals are expected to continue to grow at above-trend rates.

Brazilian soybean production in 1977 is expected to forge ahead to 13.5 million tons—up 16 percent, or 1.5 million tons (SME), from this year's volume. And the current strength in soybean prices could result in a still-larger advance by encouraging larger plantings in Argentina and minor producing countries. Should this occur, increased exportable supplies could trim price prospects after the new Southern Hemisphere harvest in April-May 1977.

Brazil also is rapidly expanding its crushing capacity, with the result that soybean oil and meal will account for expanding shares of the country's total exports of soybeans and products. Brazilian exports of soybeans and meal combined, are estimated to reach 7.6 million tons (SME) in 1976 and 8.4 million in 1977, while exports of soybeans and oil are pegged at 1.18 million and 1.35 mil-

lion tons, oil basis, respectively.

In Peru, uncertainty surrounds reports of unfavorable fishing conditions, raising concern over 1977 prospects for fish meal and oil production. So far, there is no solid evidence of problems other than recently reported above-average water temperatures. But this is enough to bring back memories of the disastrous situation of 1972/73, when a warming of offshore waters led to a prolonged cessation of fishing in Peru and a drastic decline in that country's exports of fish oil and meal.

Peru's fishmeal stocks are low and a repeat of the 1972/73 situation could mean delayed resumption of full-scale fishing until some time next year. However, Peruvian fishmeal exports now represent a smaller share of world high protein meal trade than they once did—less than 4 percent projected for 1977, compared with 12 percent averaged during the 1965-69 period.

**A**SSUMING that fishing conditions do normalize, Peru's 1977 fishmeal output is projected at 1.4 million tons (SME), or 100,000 tons (SME) above the estimated 1976 volume. Fishmeal exports are projected at 1.2 million tons (SME), compared with 1 million estimated for 1976.

In the USSR, sunflowerseed is believed to be making some comeback from the drought-reduced crop of 1975. The 1976 harvest is currently forecast at around 6.3 million tons, up 26 percent or 400,000 tons (SME) from the poor 1975 crop. However, this once-sizeable exporter of sunflowerseed oil has turned to the import market recently for large quantities of soybeans, reportedly purchasing about 2 million tons so far in 1976.

These purchases probably reflect efforts to rebuild oilseed stocks following depletion during the drought of 1975 and fears that the USSR's 1976 oilseed harvests will not reach planned levels. The country also may be using higher percentages of protein meals in feeds to conserve scarce grain supplies.

India's 1976 peanut harvest is estimated at 6.25 million tons, in-shell basis, or 8 percent below last year's record harvest of 6.8 million tons. The country's production of peanut meal is seen falling to 2 million tons (SME), in 1977 from 2.2 million estimated for 1976. Exports from the crop may dip under 1

million tons (SME), down at least 100,000 tons from this year's volume.

Canada's 1976 rapeseed crop is expected to plunge below 900,000 tons for a 45 percent reduction from the 1975 crop. Consequently, Canada's exports of rapeseed and meal in calendar 1977 are expected to fall nearly 100,000 tons (SME) or about one-fifth below this year's expected level of 400,000 tons.

While these factors together will contribute to a tight situation for world supplies of oilseed meal, they could bring some measurable improvement in the glut of vegetable oil that has plagued producers recently. For if higher prices restrict U.S. meal use, as expected, the rate of soybean crushings should decline, giving demand for oil time to catch up with supplies.

Such a change would lower U.S. edible oil stocks, which on July 31 were at about 940,000 tons or 78 percent above those of a year ago. It might also allow oil prices to share more of the load in soybean product value. Currently, soybean oil accounts for about 35 percent of the combined product value of soybean oil and meal in a bushel of soybeans, compared with 44 percent a year ago.

Looking more closely at the oil side, Malaysia's expanding palm oil output, which began as a trickle a few years ago, will continue to pour into world markets. The gain there will be accentuated by further expansion in Indonesia, Sabah, and the Ivory Coast. Consequently, world palm oil output in 1977 is projected to rise by about 350,000 tons to nearly 3.6 million. Nearly four-fifths of the increase in output will be for export, with exports projected to rise to nearly 2.4 million tons in 1977.

Partially offsetting this gain will be some reduction in other oil-producing countries. For example, world coconut oil output in 1977 is projected to dip by 200,000 tons to 2.85 million following this year's sharp gain. Basis for this projected decline is less favorable rainfall in the Philippines this year than in 1975, which should more than offset the small increase in bearing tree numbers.

Olive oil production, which is consumed largely in the Mediterranean countries where it is produced, is expected to drop by about 300,000 tons from this year's output to 1.4 million tons. The shortfall should make room for increased imports of seed oils.

# India Boosting Fruit and Vegetable Output for Export

By JOHN B. PARKER, JR.

*Foreign Demand and Competition Division  
Economic Research Service*

INDIA HAS BOOSTED fruit and vegetable production in response to growing domestic and foreign demand. The upsurge has attracted foreign investors who are making money and technical assistance available. This may enable India to strengthen its position on world markets as a fruit and vegetable processor and exporter.

The Soviet Union, the United Kingdom, Iran, the United States, and Japan are India's most important export markets for farm products. In addition, a number of Middle Eastern countries have turned to India for fruits and vegetables after the fighting in Lebanon disrupted their traditional trade with that market.

**Vegetable production.** Some Indian farmers have discovered that by switching from traditional rice and millet to vegetable production they can earn better incomes. With multiple cropping, the use of more natural and chemical inputs, and increased family labor, it is common for some farmers to harvest three vegetable crops a year. A number of farmers living near large cities in the Gangetic Plain have shifted their production from wheat to potatoes, tomatoes, egg plants, and onions, often grown on their most fertile, irrigated land.

Most Indian consumers prefer fresh fruits and vegetables over canned items, so that most processed products are exported. Vegetables and root crops provided the average Indian with about 5 percent of the 2,005 calories he consumed daily in 1975.

India's potato crop set a record of over 7 million tons in the spring of 1976, up from 6.2 million tons the year before. Potato exports will exceed 50,000 tons during the current year, largely because of increased deliveries to Iran, the United Kingdom, Oman, and Dubai.

India became a large-scale onion exporter to the Arabian Peninsula after the Lebanon civil strife cut off that source of supply and booming domestic

demand suddenly caused Iran to shift from a significant onion exporter to a surprisingly large importer. Kuwait, Qatar, the United Arab Emirates (UAE), Saudi Arabia, and Oman now buy sizable volumes of Indian onions. This year, India's onion exports are expected to be about twice as large as those of potatoes.

The sudden overseas demand for onions caused domestic prices to shoot skywards and India banned onion exports in December 1975. The ban was lifted in February 1976 after Iran agreed to buy at least 10,000 tons of Indian onions annually for the next 5 years.

India's total output of root crops and vegetables during 1975 was some 35 million tons—about double the 1961-65 average. Although informal production data are generally available from a wide variety of sources for 30 vegetable crops, official information is normally published only for cassava, sweet potatoes, potatoes, and—in some States—onions. Another 40 vegetables are also grown but production data for these are hard to come by. However, their total output is estimated at about 3.3 million tons.

COLD STORAGE warehouses have been built in many towns of northwestern India where potatoes are stored during the spring and summer and apples in the autumn. Most of India's potatoes, turnips, radishes, onions, carrots, beets, leeks, and garlic are produced in the country's northern States. Cassava is an important crop in southern India, particularly in Tamil Nadu and Kerala.

**Fruit production.** India is the world's largest producer of tropical fruit and is one of Asia's five leading producers of deciduous fruit—others are the PRC, Japan, Turkey, and Iran. While total Indian fruit outturn is about equal to that of the United States—reaching a record 15 million tons in 1975—the crop makeup differs. Mangoes and bananas account for about three-fourths

of India's total fruit production while apples and grapes make up about half of U.S. fruit outturn.

Excellent weather and production of orchards planted with improved varieties of mangoes are expected to help boost output to a record 9 million tons in 1976—up from an average of about 7 million tons during 1970-74.

New mango gardens have been planted in Uttar Pradesh and Andhra Pradesh. High-yielding varieties of mangoes, papayas, avacadoes, grapes, and apples have been developed by the Indian Council of Agricultural Research and farmers are beginning to plant them on thousands of acres.

Excellent weather in most of India in the spring of 1976 also boosted prospects for a record crop of deciduous fruits—possibly raising output to 700,000 tons. Frost damaged apples in Himachal Pradesh and Kashmir in 1974 causing production to decline from 230,000 tons in 1973 to 185,000 a year later. Output rebounded in 1975 to 250,000 tons and is expected to be 15 percent higher in 1976.

Young orchards of Red Delicious, Jonathan, and Rome Beauty are expected to strengthen apple output in northern India this year. The new cold storage warehouses in Punjab, Delhi, and Uttar Pradesh will be used to store the increased output between potato crops.

Distribution of apples from orchards in the Himalayan foothills to urban markets throughout India has been a recent development. Production of pears, plums, and peaches also has been increased to meet demand resulting from the use of commercial marketing techniques.

Grape production in Andhra Pradesh, Karnataka, and Maharashtra increased markedly during 1968-72 when urban residents made tax-free investments in vineyards. However, saturation of urban markets caused prices to fall and the rate of production growth has slowed since 1972. The release of new, disease-resistant varieties and improved marketing techniques are expected to bring about a revived spurt in grape planting.

Exports of Indian grapes to Mideast countries will probably continue to rise as more importers there turn to India to fill part of the gap left by smaller deliveries from Lebanon and South Africa.

Investors from Japan and Europe





*Left: Indian woman, surrounded by vegetables she is offering for sale, awaits the arrival of a customer.  
Below: Indian children help to gather potatoes in a thickly strewn field. Indian farmers harvested a potato crop of over 7 million tons in 1976 and will export in excess of 50,000 tons.*



have helped to develop new banana groves in southern and western India. Cooperatives have provided credit for inputs needed to establish other new groves. Their output helped boost the total crop to about 3.5 million tons in 1975—slightly above the previous peak of 3.37 million tons a year earlier.

Nagpur is currently the center of India's orange production. Total output has remained at about 1 million tons annually since 1970. Japanese investors have financed development of large orchards of mandarin oranges in southern India, largely to supply yet-to-be built canneries to process these small oranges for export.

India is also one of Asia's leading producers of avocados—growing more than 120,000 tons annually—and is looking to the export market for sales.

Exports of fresh fruit by India have increased from about \$1.1 million between April 1974/March 1975 to about \$5 million during 1975/76. Striking gains in shipments to Iran, Oman, Kuwait, and the United Arab Emirates

accounted for most of the jump.

India exported 1,619 metric tons of fresh mangoes during 1974/75 for \$854,000, with 646 tons going to Kuwait. Mango exports to other countries also rose markedly during 1975/76. Exports of apples, bananas, and oranges to Iran are up in 1975/76, dramatically lifting foreign sales of these items above token levels in 1974/75.

Exports of tamarinds, lemons, sapotas, pears, grapes, and pineapples to Oman, the United Arab Emirates, Qatar, and Kuwait were also higher in 1975. The United Kingdom took about 14 percent of India's 1974/75 exports of \$3.3 million of fruit juices and preparations.

New arrangements to send \$3 million worth of mango juice and other fruit preparations to the Soviet Union in 1976 will probably cause the United Kingdom to fall to second place as a market for these products. India's exports of dried fruit rose from \$1.1 million in 1974/75 to about \$2 million in 1975/76. Further gains in shipments to

Mideast markets and Eastern Europe are expected. Exports of apples to the Mideast are expected to increase markedly this year—particularly to Iran and Oman.

India's total exports of fruit and preparations are likely to reach \$20 million in 1976/77—up from \$4.5 million in 1974/75 and about \$9 million in 1975/76. Larger sales to Mideast markets, the Soviet Union, and the United Kingdom will account for most of the increase. Sales of mango products and tamarinds to the United States also are increasing.

India might be able to push exports of fresh fruit and fruit products to \$100 million by 1980.

A number of new canneries are under construction in India to process guavas, oranges, and papayas, and foreign investors are examining the possibility of building additional ones. Some investors in Kuwait want to process fruit pulp in large containers in India for shipment to Kuwait where it would be recanned in consumer-sized packs and offered for sale throughout the Mideast.





First Class

If you no longer wish to receive this publication, please check here ☐ and return this sheet, or addressed portion of envelope in which publication was mailed.

If your address should be changed ☐ PRINT or TYPE the new address, including ZIP CODE, and return the whole sheet to:

Foreign Agricultural Service, Rm. 5918  
U.S. Department of Agriculture  
Washington, D.C. 20250

FOREIGN AGRICULTURE

## Mideast Exports

*Continued from page 4*

markets through relief programs—valued at less than \$30 million annually—include deliveries of wheat flour, blended foods, and vegetable oils to Jordan, Lebanon, and Yemen Arab Republic.

A great deal of the recent setback in total value for some U.S. agricultural exports to the Mideast was caused by port congestion and distribution problems, particularly in the Persian Gulf. In the long run, however, demand for imported farm products will become more diversified and increase markedly in the Mideast for a variety of reasons:

- Spectacular gains in foreign exchange due to petroleum wealth have spurred demand for agricultural imports as incomes increase and more generous allocations of foreign exchange for food imports are made. Even countries without petroleum wealth are enjoying unprecedented foreign exchange from financial arrangements with their rich neighbors.

- With an annual population growth of almost 3 percent, limited prospects for expanded cropland, and water shortages, local food production is hard pressed to keep pace with demand.

- Programs to upgrade diets have become a major part of development plans in the Mideast.

- Most of the growth in demand for imported farm products during the last 3 years has been in urban areas. However, programs for economic develop-

ment and massive reconstructive projects are now bolstering nonfarm income in rural areas as well.

- New marketing, storage, and transportation systems being developed will enable Mideast importers to obtain U.S. farm products more quickly and cheaply.

- Large supplies of farm products have been available in recent years for quick delivery to Mideast customers by exporters in North America, Brazil, the EC, Pakistan, and Australia.

In addition to the United States, these other suppliers are sharing in the wealth of oil-rich nations which have increased their total agricultural imports 312 percent between 1970 and 1975 (from \$1.7 billion to \$7 billion). Some of the most spectacular gains in exports of food to the Mideast in the past year have been made by Asian and Latin American countries.

Japan has captured a large share of the booming market for canned fruit juice and soft drinks, while Australia has expanded its markets in wheat, dairy products, meat, and canned food. Deliveries of canned vegetables by the People's Republic of China are competing with U.S. products, although sales of rice, meat, and peanuts declined in early 1976.

Pakistan greatly expanded sales of basmati rice in late 1975 and early 1976, with exports to Mideast countries in 1976 expected to reach 400,000 tons. Iraq imported 100,000 tons of Pakistani rice in early 1976, and large purchases of this commodity by Iran, UAE, and

Oman caused purchases from the United States to decline in early 1976.

Thailand increased its sales of corn, rice, and sorghum to Saudi Arabia, UAE, and Yemen Arab Republic.

Brazil has recently become a major supplier of sugar, soybean oil, beef, canned meat, and vegetables, while Argentina and Uruguay are on their way to becoming important beef suppliers to the Mideast.

Although many Mideast countries purchase commodities from suppliers who can often sell processed foods at lower prices than the United States can, many consumers seem to prefer to pay higher prices for U.S. products because of their quality reputation.

Many Mideast food importers have purchased products from Asian or European suppliers when the volume of their trade was small, but turned to U.S. suppliers as their demand exceeded the ability of earlier suppliers to fully meet their needs. Opportunities have opened up in the recent year for sales of products where the United States is considered a residual supplier, contacted only during periods of extreme shortage. Commodities in this category include apples, oranges, onions, potatoes, canned foods, and other products traditionally supplied by Lebanon.

**CORRECTION:** "Metric System Taking Over in the United States," September 6, 1976: Quintals, inadvertently used in the table, are not accepted by the International System of Units.